

We claim:

- 1 1. A retainer clip for retaining a lock plug within a bore of
2 a lock housing, the housing having a central axis extending
3 through the bore and an end surface extending generally radially
4 with respect to the bore axis, the plug having a longitudinal
5 centerline, an outer circumferential surface and two openings
6 spaced circumferentially about the outer surface, the retainer
7 clip comprising:
8 a generally arcuate body disposeable about the plug outer
9 surface and having a generally radial retention surface, the
10 retention surface being positionable generally against the
11 housing end surface so as to prevent axial displacement of the
12 plug along the bore axis, and first and second free ends; and
13 two projections each disposed proximal to a separate one of
14 the two body ends, each projection being disposeable within a
15 separate one of the plug openings when the body is disposed on
16 the plug outer surface so as to generally retain the clip
17 engaged with the plug.
- 1 2. The clip as recited in claim 1 wherein the body has an
2 inner circumferential surface and each projection extends
3 generally radially inwardly from the body inner surface.
- 1 3. The clip as recited in claim 2 wherein the two projections
2 each extend generally toward the plug centerline when the body
3 is disposed about the plug outer surface.
- 1 4. The clip as recited in claim 1 wherein the body is
2 generally semicircularly shaped.

1 5. The clip as recited in claim 1 wherein the body partially
2 circumscribes a centerline and the two body free ends are
3 angularly spaced apart about the centerline by about one hundred
4 eighty degrees.

1 6. The clip as recited in claim 1 wherein the body has a
2 central bended portion disposed between the two ends and offset
3 radially inwardly with respect to a remainder of the body.

1 7. The clip as recited in claim 6 wherein the clip body is
2 disposeable upon the plug in a first orientation at which the
3 hinge is located proximal to a first section of the plug outer
4 surface and is alternatively disposeable upon the plug in a
5 second orientation at which the hinge is located proximal to a
6 second section of the plug outer surface, the plug first and
7 second surface sections facing generally in opposing directions
8 away from the plug axis.

1 8. The clip as recited in claim 1 wherein the body has two
2 opposing generally parallel, generally flat radial surfaces, one
3 of the two radial surfaces providing the retention surface, and
4 two opposing, generally parallel inner and outer circumferential
5 surfaces such that body has a generally rectangular cross-
6 section in any plane extending generally perpendicularly through
7 the two radial surfaces.

1 9. The clip as recited in claim 1 wherein the body includes a
2 central hinge portion, a first arm portion extending between the
3 hinge and the first free end and a second arm portion extending
4 between the hinge portion and the second free end, the hinge
5 portion being configured such that at least one of the two arm

6 portions is deflectable generally about the hinge portion so as
7 to move with respect to the other one of the two arm portions.

1 10. The clip as recited in claim 9 wherein the body first and
2 second ends are spaced apart by a distance and the hinge is
3 configured such that the one arm portion is movable with respect
4 to the other arm portion so as to increase the spacing distance
5 when the clip is one of being installed upon the plug and being
6 removed from the plug.

1 11. A retainer clip for retaining a lock plug within a bore of
2 a lock housing, the housing having a central axis extending
3 through the bore and an end surface extending generally radially
4 with respect to the bore axis, the retainer clip comprising:
5 a generally arcuate body disposeable about the plug and
6 having a retention surface positionable generally against the
7 housing end surface so as to prevent axial displacement of the
8 plug along the bore axis, the body having a central hinge
9 portion, a first arm portion extending between the hinge portion
10 and a first free end, and a second arm portion extending between
11 the hinge portion and a second free end, the second end being
12 spaced from the first end, the hinge portion being configured
13 such that at least one of the two arm portions is deflectable
14 generally about the hinge portion so as to move with respect to
15 the other one of the two arm portions.

1 12. The clip as recited in claim 11 wherein the body first and
2 second ends are spaced apart by a distance and the hinge is
3 configured such that the one arm portion is movable with respect
4 to the other arm portion so as to increase the spacing distance
5 when the clip is one of being installed upon the plug and being
6 removed from the plug.

1 13. The clip as recited in claim 11 wherein the body hinge
2 portion includes a first section connected with the first arm
3 portion and a second section connected with the second arm
4 portion and with the first section, at least one of the two
5 hinge sections being deflectable with respect to the other one
6 of the two hinge sections so as to generally pivot a connected
7 one of the two body arm portions with respect to the other one
8 of the two body arm portions.

1 14. The clip as recited in claim 13 wherein the body partially
2 circumscribes a centerline, each one of the two arm portions
3 extends generally circumferentially with respect to the axis,
4 and each one of the two hinge sections extends at least
5 partially radially inwardly from the connected arm portion and
6 generally toward the axis.

1 15. The clip as recited in claim 11 wherein the hinge portion
2 is offset generally radially inwardly with respect to the two
3 arm portions.

1 16. The clip as recited in claim 11 wherein the hinge portion
2 is generally U-shaped.

1 17. The clip as recited in claim 11 wherein the hinge portion
2 is integrally formed with each one of the two arm portions such
3 that the clip is of one-piece construction.

1 18. The clip as recited in claim 11 wherein the hinge portion
2 has a radially-extending key stop surface such that when the
3 clip is disposed on the plug, the stop surface is located so as
4 to prevent movement of a key within the plug along the bore
5 centerline.

1 19. The clip as recited in claim 11 wherein the body partially
2 circumscribes a centerline and the two body free ends are
3 angularly spaced apart about the centerline by about one hundred
4 eighty degrees.

1 20. The clip as recited in claim 19 wherein:

2 the lock plug has a central axis, an outer circumferential
3 surface extending about the axis and two openings extending
4 radially inwardly from the outer surface, the two openings being
5 angularly spaced apart about the axis by about one-hundred
6 eighty degrees; and

7 the clip further includes two projections each extending
8 radially inwardly from a separate one of the body free ends,
9 each clip projection being separately disposeable within each
10 one of the two plug openings.

1 21. The clip as recited in claim 20 wherein the clip body is
2 disposeable upon the plug in a first orientation at which the
3 hinge portion is located proximal to a first section of the plug
4 outer surface and is alternatively disposeable upon the plug in
5 a second orientation at which the hinge portion is located
6 proximal to a second section of the plug outer surface, the plug
7 first and second surface sections facing generally in opposing
8 directions away from the plug axis.

1 22. The clip as recited in claim 11 wherein the first arm
2 portion has substantially greater length than the second arm
3 section such that the hinge is located more proximal to the
4 second end than to the first end.

1 23. The clip as recited in claim 1 wherein the body has two
2 opposing generally parallel, generally flat radial surfaces, one
3 of the two radial surfaces providing the retention surface, and
4 two opposing, generally parallel inner and outer circumferential
5 surfaces such that body has a generally rectangular cross-
6 section in any plane extending generally perpendicularly through
7 the two radial surfaces.

1 24. A retainer clip for retaining a lock plug within a bore of
2 a lock housing, the housing bore having a longitudinal
3 centerline, and the housing further having an end surface
4 extending generally radially with respect to the centerline, the
5 plug having an outer circumferential surface, the clip
6 comprising:

7 a generally arcuate body extending circumferentially about
8 a central axis, the body having two opposing free ends, a radial
9 retention surface extending between the ends, the retention
10 surface being positionable generally against the housing end
11 surface so as prevent axial displacement of the plug along the
12 bore centerline, and an integral hinge portion disposed between
13 the two ends and extending generally radially inwardly with
14 respect to a remainder of the body and generally toward the
15 axis, the hinge being configured to displace at least one of the
16 two ends with respect to the other one of the two ends.

1 25. A lock assembly comprising:

2 a lock housing having a bore, a longitudinal centerline
3 extending through the bore, and an end surface extending
4 generally radially with respect to the bore centerline;

5 a lock plug disposeable within the housing bore; and

6 a generally arcuate retainer clip disposeable about the
7 plug and having a retention surface positionable generally

8 against the housing end surface so as to prevent axial
9 displacement of the plug along the centerline, the body having a
10 central hinge portion, a first arm portion extending between the
11 hinge portion and a first free end, and a second arm portion
12 extending between the hinge portion and a second free end, the
13 second end being spaced from the first end, at least one of the
14 two arm portions being pivotable about the hinge portion with
15 respect to the other one of the two arm portions so as to vary a
16 spacing distance between the two ends.

1 26. A lock assembly comprising:
2 a lock housing having a bore, a longitudinal centerline
3 extending through the bore, and an end surface extending
4 generally radially with respect to the bore centerline;
5 a lock plug disposeable within the housing bore and having
6 a longitudinal centerline, an outer circumferential surface and
7 two openings spaced circumferentially about the outer surface;
8 and
9 a retainer clip including a generally arcuate body
10 disposeable about the plug outer surface, the body having first
11 and second free ends and a generally radial retention surface,
12 the retention surface being positionable generally against the
13 housing end surface so as to prevent axial displacement of the
14 plug along the bore axis, and two projections each disposed
15 proximal to a separate one of the two body ends, each projection
16 being disposeable within a separate one of the plug openings
17 when the body is disposed on the plug outer surface so as to
18 generally retain the clip engaged with the plug.